

WHAT IS CLAIMED IS:

1. A light-emitting device comprising:
a first emission layer formed on a substrate; and
a second emission layer formed on said first emission layer to provide a laminated structure, said second emission layer emitting light having a different wavelength from that of light emitted by said first emission layer, wherein
at least one of said first emission layer and said second emission layer comprises a host material, a luminescent first dopant material, and a non-luminescent second dopant material.
2. The light-emitting device according to claim 1, wherein said non-luminescent second dopant material has at least one of a function of assisting in transportation of carriers and a function of transferring energy from said host material to said luminescent first dopant material.
3. The light-emitting device according to claim 2, wherein said non-luminescent second dopant material comprises a naphthacene derivative having the function of transferring energy from said host material to said luminescent first dopant material.
4. The light-emitting device according to claim 3,

wherein said non-luminescent second dopant material consisting of said naphtacene derivative is tBuDPN.

5. The light-emitting device according to claim 4, wherein said second dopant material consisting of said tBuDPN is contained in at least one of said first emission layer and said second emission layer in an amount that is equal to or greater than 5% by weight and is less than 50% by weight.

6. The light-emitting device according to claim 2, wherein said non-luminescent second dopant material comprises a rubrene derivative having the function of transferring energy from said host material to said luminescent first dopant material.

7. The light-emitting device according to claim 2, wherein said non-luminescent second dopant material comprises an amine derivative having the function of assisting in transportation of said carriers.

8. The light-emitting device according to claim 7, wherein said non-luminescent second dopant material consisting of said amine derivative is NPB.

9. The light-emitting device according to claim 8,

wherein said non-luminescent second dopant material consisting of said NPB is contained in at least one of said first emission layer and said second emission layer in an amount that is equal to or greater than 5% by weight and is less than 50% by weight.

10. The light-emitting device according to claim 1, wherein each of said first emission layer and said second emission layer comprises said host material, said luminescent first dopant material, and said non-luminescent second dopant material.

11. The light-emitting device according to claim 1, wherein:

said first emission layer comprises an orange emission layer containing said second dopant material having a function of transferring energy from said host material to said luminescent first dopant material; and

said second emission layer comprises a blue emission layer containing said second dopant material having a function of assisting in transportation of carriers.

12. The light-emitting device according to claim 11, wherein said orange emission layer comprises:

the host material consisting of an amine derivative;

the luminescent first dopant material consisting of a

naphthacene derivative; and

the non-luminescent second dopant material consisting of a naphthacene derivative and having the function of transferring energy from said host material to said luminescent first dopant material.

13. The light-emitting device according to claim 12, wherein said orange emission layer comprises:

the host material consisting of NPB;

the luminescent first dopant material consisting of DBzR;

and

the second dopant material consisting of tBuDPN.

14. The light-emitting device according to claim 11, wherein said blue emission layer comprises:

the host material consisting of an anthracene derivative;

the luminescent first dopant material consisting of a perylene derivative; and

the non-luminescent second dopant material consisting of an amine derivative and having the function of assisting in transportation of the carriers.

15. The light-emitting device according to claim 14, wherein said blue emission layer comprises:

the host material consisting of TBADN;

the luminescent first dopant material consisting of TBP;
and
the non-luminescent second dopant material consisting of
NPB.

16. The light-emitting device according to claim 1,
wherein:

said first emission layer comprises an orange emission
layer disposed on the side of a light-emitting surface of the
light-emitting device; and

said second emission layer comprises a blue emission
layer disposed on the side opposite to the light-emitting
surface.

17. The light-emitting device according to claim 1,
further comprising:

a thin-film transistor formed on said substrate for each
pixel; and

a color filter disposed above a region in which said
thin-film transistor is not formed and disposed below said first
emission layer and said second emission layer.

18. The light-emitting device according to claim 1,
wherein said first emission layer comprises an orange emission
layer containing said second dopant material having a function

of transferring energy from said host material to said luminescent first dopant material.

19. The light-emitting device according to claim 1, wherein said second emission layer comprises a blue emission layer containing said second dopant material having a function of assisting in transportation of carriers.

20. The light-emitting device according to claim 2, wherein:

said non-luminescent second dopant material comprises at least two said second dopants; and

said at least two second dopants comprise a dopant that assists in transportation of carriers, and a dopant that transfers energy from said host material to said luminescent first dopant material.